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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/758,417	01/12/2001	Hwa Young Yun	630-1220P	8541

35884 7590 05/17/2004

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EXAMINER

SHELEHEDA, JAMES R

ART UNIT PAPER NUMBER

2614

DATE MAILED: 05/17/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/758,417

Applicant(s)

YUN, HWA YOUNG

Examiner

James Sheleheda

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-20 and 22-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-20, 23-28 and 31-42 is/are allowed.
- 6) ☒ Claim(s) 22, 29 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The amendment filed 03/03/04 (incorporating the amendment filed on 01/17/02) is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure (as filed 01/12/01) is as follows: Page 16, lines 6-8 define a **"diagnostic request object"** in the diagnostic resource on the resource layer which performs diagnosing of a system and transfers its result to the head end. The performance of diagnosing by the diagnostic request object is not previously contained in the disclosure as originally filed. Page 16, lines 14-16 define a **"diagnostic confirmation object"** which transfers a **"diagnosis result performed by the OOB protocol processor 61 to the head end"**. The performance of a diagnosis by the OOB protocol processor is not previously contained in the original disclosure (as filed 01/12/01).

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 22, 29 and 30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The current invention is a system that calls for the diagnosing of an operation state of a set-top box, wherein the diagnosing is performed by the main circuit of the set-top and by a cable headend (see page 19, lines 23-24, and page 20, lines 1-11).

The disclosure as originally filed (on 01/12/01) fails to adequately describe a set-top box wherein the diagnosing of a system is performed by a "diagnostic request object", as newly recited in claim 22, lines 1 and 2.

As to claim 29, the current invention calls for a CPU controlling a POD with a diagnostic resource on a resource layer of the POD interface protocol, wherein the CPU controls the transmitting of diagnosis information performed by the set-top main circuit (see page 19, lines 1-24 and page 20, lines 1-24).

The disclosure as originally filed (on 01/12/01) fails to adequately describe a POD comprising a CPU, controlling the conditional access unit, which performs the diagnosing of specific information or an operation state of the set-top box, as newly recited in claim 29, lines 9-12. These limitations are new matter and they should be canceled from the claims.

Response to Arguments

4. Applicant's arguments filed 03/03/04 have been fully considered but they are not persuasive.

For the following response, the original specification is considered to have been filed on 01/12/01, substitute specification (A) is considered to have been filed on 01/17/02, and substitute specification (B) is considered to have been filed on 03/03/04.

(a) Page 16, lines 6-11 (of the amendment), states "an amended mark-up copy of the original specification" has been included to correct deficiencies pointed out by the examiner.

In response, this included mark-up specification (B)(filed 03/03/04) appears to actually be a mark-up of the substitute specification (A)(filed 01/17/02) and not the original specification (filed 01/12/01).

(b) As to claim 22, applicant argues on page 17, lines 13-15 (of the amendment), "support for this amendment can be seen in the original specification, for example on Page 17, lines 10-11, and in Step 7 of Fig. 11."

In response, the examiner finds that the claimed subject matter is still considered new matter and not supported by the original specification (filed 01/12/01). More specifically, page 17, lines 7-11 (of the original specification filed 01/12/01), states "POD requests the system state by using the diag_stat_req() object object". The original

specification (filed 01/12/01) contains no mention of or support for "wherein the diagnostic request object **performs** a diagnosing of a system", as claimed.

(c) Applicant further states on page 17, lines 15-17 (of the amendment), that "Applicant has amended the specification...in order to provide proper antecedent basis in the specification for the claimed subject matter."

In Response:

(1) It is unclear as to which substitute specification applicant refers to for providing this support, substitute specification (A-filed 01/17/02) or substitute specification (B-filed 03/03/04).

(2) It is improper to amend a specification to include subject matter from an amended claim. The contents of the amended claim are new matter and cannot be incorporated into the original specification.

(d) As to claims 29 and 30, applicant states on page 18, lines 1-3 (of the amendment), "the Examiner is directed to the original specification, for example page 13, line 6 to page 14, line 20, which provides full support for subject matter in claim 29.

In response, the examiner finds that the claimed subject matter is still considered new matter and not supported by the original specification (filed 01/12/01). More specifically, page 14, lines 16-20 of the original specification (filed 01/12/01), states "the cable headend is able to check the operation state of the set-top box **through** the POD module". It does not state that the POD actually performs the diagnosing. The original

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specification (filed 01/12/01) contains no mention of or support for "a CPU controlling the conditional access unit...**diagnosing** specific information or an operation state of the set top box", as claimed.

Allowable Subject Matter

5. The following is a statement of reasons for the indication of allowable subject matter:

Claims 18-20 and 23-26 are allowable because the prior art fails to teach or disclose a set top box comprising a main circuit unit which receives, decodes and outputs a broadcast signal, a CPU controlling the main circuit unit which performs POD interfacing with a head end through a POD interface protocol and diagnoses specific information of the main circuit unit using a **diagnostic resource** on a **resource layer** of the **POD interface protocol**, a POD interface port exchanging data with the head end according to the POD interface protocol of the CPU, wherein the **diagnostic resource** includes at least one **diagnostic request object** and a **diagnostic confirmation object**, as recited in the claims.

Claim 27 is allowable because the prior art fails to teach or disclose a set top box comprising a main circuit unit which receives, decodes and outputs a broadcast signal, a CPU controlling the main circuit unit which performs POD interfacing with a head end through a POD interface protocol and diagnoses specific information of the main circuit unit using a **diagnostic resource** on a **resource layer** of the **POD interface protocol**,

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and a POD interface port exchanging data with the head end according to the POD interface protocol of the CPU, wherein the head end periodically checks an operation state of the set top box and informs a pertinent set top manufacturer of the diagnosis through a network on a real time basis, as recited in the claim.

Claim 28 is allowable because the prior art fails to teach or disclose a set top box comprising a main circuit unit which receives, decodes and outputs a broadcast signal, a CPU controlling the main circuit unit which performs POD interfacing with a head end through a POD interface protocol and diagnoses specific information of the main circuit unit using a **diagnostic resource** on a **resource layer** of the **POD interface protocol**, and a POD interface port exchanging data with the head end according to the POD interface protocol of the CPU, wherein the **diagnostic resource** previously defines an object that a POD interface module and the set top box are to use for exchanging a diagnosis information format for identifying a set top box, divides the whole system into sub-systems, a functional unit for checking, assigns an ID to each sub-system, defines each state of the sub-systems and exchanges status information of each sub system as a data of the object, as recited in the claim.

Claims 31 and 32 are allowable because the prior art fails to teach or disclose an open cable system comprising, a set top box which receives, decodes and outputs a broadcast signal, a point of deployment (POD) module having a conditional access unit, descrambling the broadcast signal and performing bi-directional communication with the

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set top box and headend, and a POD interface having a POD interface protocol so as to perform an interfacing between the set top box and the POD module, the POD interface protocol having a **diagnostic resource** at a **resource layer** so that the head end can diagnose specific information of the set top box, wherein the **diagnostic resource** includes at least one **diagnostic request object** and a **diagnostic confirmation object**, as recited in the claims.

Claim 33 is allowable because the prior art fails to teach or disclose an open cable system comprising, a set top box which receives, decodes and outputs a broadcast signal, a point of deployment (POD) module having a conditional access unit, descrambling the broadcast signal and performing bi-directional communication with the set top box and headend, and a POD interface having a POD interface protocol so as to perform an interfacing between the set top box and the POD module, the POD interface protocol having a **diagnostic resource** at a **resource layer** so that the head end can diagnose specific information of the set top box, wherein the **diagnostic resource** previously defines an object that a POD interface module and the set top box are to use for exchanging a diagnosis information format for identifying a set top box, divides the whole system into sub-systems, a functional unit for checking, assigns an ID to each sub-system, defines each state of the sub-systems and exchanges status information of each sub system as a data of the object, as recited in the claim.

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Claims 34-40 are allowable because the prior art fails to teach or disclose a method of performing a diagnostic function in a set top box, which performs POD interfacing with the head end through a POD interface protocol and diagnoses an operation state of the main circuit unit using a **diagnostic resource** on the **POD interface protocol**, by receiving a status request from the head end, communicating with the head end using diagnostic support objects, wherein the head end requests information from the set top using **diagnostic request objects**, and the head end receives information from the set top using **diagnostic confirmation objects**, as recited in the claims.

Claims 41 and 42 are allowable because the prior art fails to teach or disclose a method of performing a diagnostic function in an open set-top box by performing POD interfacing with the head end, diagnosing specific information of the set top main circuit unit through a **POD interface protocol diagnostic resource**, the POD requesting information from the main circuit unit and transmitting said information to the head end, the head end detecting an error and requesting detailed sub-system information of the set top, and the POD requesting detailed sub-system error information from the main circuit and transmitting said detailed information to the head end, as recited in the claims.

Conclusion

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6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. The following are suggested formats for either a Certificate of Mailing or Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with all correspondence concerning this application or proceeding to establish a date of mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in such communication being considered as timely if the established date is within the required period for reply. The Certificate should be signed by the individual actually depositing or transmitting the correspondence or by an individual who, upon information and belief, expects the correspondence to be mailed or transmitted in the normal course of business by another no later than the date indicated.

Certificate of Mailing

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on _____
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Typed or printed name of person signing this certificate:

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Certificate of Transmission

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office, Fax No. (703)_____ - _____ on _____.
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Typed or printed name of person signing this certificate:

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Please refer to 37 CFR 1.6(d) and 1.8(a)(2) for filing limitations concerning facsimile transmissions and mailing, respectively.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Sheleheda whose telephone number is (703) 305-8722. The examiner can normally be reached on 8:00-4:30.

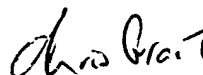
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on (703) 305-4755. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James Sheleheda
Patent Examiner
Art Unit 2614

JS



CHRIS GRANT
PRIMARY EXAMINER